## Index of Claims

Application/Control No.

Nashaat T. Nashed, Ph. D.

10/677,733

Applicant(s)/Patent under Reexamination

GARDNER ET AL.

Examiner

1656

|          |          | 1       | Rejected  |          |               |          |          | -         | (Through numeral) Cancelled N Non-Elec |           |          |          |          |   |          |           | ted      |          | A             | Appeal   |          |              |          |          |          |           |           |          |          |               |              |     |
|----------|----------|---------|-----------|----------|---------------|----------|----------|-----------|--|-----------|----------|----------|----------|---|----------|-----------|----------|----------|---------------|----------|----------|--------------|----------|----------|----------|-----------|-----------|----------|----------|---------------|--------------|-----|
|          |          | =       | = Allowed |          |               |          |          | ÷         | Restricted                             |           |          |          |          |   |          |           | ı        | lr       | ter           | fere     | nce      |              | 0        | Objected |          |           |           |          |          |               |              |     |
| Cla      | aim      | Date    |           |          |               |          |          |           |  | Claim Dai |          |          |          |   |          | ate       | e        |          |               |          |          | Date         |          |          |          |           |           |          |          | ]             |              |     |
| -        | Ē        | 20      |           |          |               |          |          |           |  |           | _        | la la    |          |   | П        |           |          |          |               |          |          | _            | a l      |          |          |           |           |          |          |               |              |     |
| Final    | Original | 12/6/07 |           |          |               |          |          |           |  | l         | Final    | Original |          |   |          |           |          |          |               |          |          | Final        | Original |          |          |           | ١         |          |          |               |              |     |
|          | 1        |         |           |          |               |          | 7        | $\exists$ | I                                      |           |          | 51       |          |   |          |           |          |          |               |          |          |              | 101      |          |          |           |           |          |          |               | $\perp$      | 1   |
|          | 2        | L       |           | _        |               |          | 1        |           |  | 7         |          | 52       |          |   | П        | $\exists$ |          |          |               | _        | _        |              | 102      |          |          | Ц         |           |          |          |               |              | 1   |
| -        | 3        | 0       | Н         | -        | -             | +        | -        | +         | +                                      | -         | -        | 53<br>54 | Н        | Н | Н        | -         | -        | Н        | Н             | $\dashv$ | $\dashv$ | -            | 103      | Н        | -        | +         | $\dashv$  | -        | _        | 4             | +            | 4   |
| -        | 5        | 7       | $\vdash$  | -        | $\dashv$      | +        | +        | +         | +                                      | $\dashv$  | -        | 55       | Н        | Н | Н        | +         | -        | Н        | Н             | +        | $\dashv$ | -            | 104      | Н        | -        | $\dashv$  | -         | -        | -        | +             | +            | +   |
| -        | 6        | V       | Н         | -        | +             | +        | +        | +         | +                                      | ┨         | _        | 56       | Н        | Н | Н        | $\dashv$  | ╡        | Н        | $\vdash$      | $\dashv$ | -        | $\vdash$     | 106      | Н        | _        | $\vdash$  | $\dashv$  | $\dashv$ | _        | $^+$          | +            | ٠.  |
| -        | 7        | Ė       |           | 7        | $\dashv$      | $^{+}$   | $\dashv$ | $^{+}$    | $^{+}$                                 | ٦.        | $\vdash$ | 57       |          | Н | Н        | $\dashv$  | T        | Н        | $\neg$        | $\dashv$ | $\dashv$ |              | 107      | Н        | _        | $\vdash$  | 1         | _        | _        | $^{+}$        | +            | 1   |
|          | 8        |         |           |          |               |          |          |           | 1                                      |           |          | 58       |          |   |          | J         |          |          |               |          |          |              | 108      |          |          |           |           |          |          |               | $\perp$      | ]   |
|          | 9        |         |           |          |               | T        | T        | I         | T                                      | 1         |          | 59       |          |   |          | I         |          |          |               | $\Box$   |          |              | 109      |          |          | П         | I         | I        | Δ        | I             | T            | 1   |
| _        | 10       | Ц       | Ц         | _        | _             | 4        | 4        | 4         | 4                                      | 4         |          | 60       | Ш        |   | Ш        | 4         | 4        | Ц        |               | 1        | 4        | <u> </u>     | 110      | Н        |          | П         | 4         | _        | _        | 1             | 1            | 4   |
|          | 11       | L.      | Н         | _        | 4             | 4        | 4        | $\perp$   | +                                      | 4         | $\vdash$ | 61       | ш        | Ш | Ш        | 4         | _        | Н        | Н             | 4        | 4        | _            | 111      | Н        | _        | $\vdash$  | 4         | _        | _        | _             | +            | 4   |
|          | 12       | _       | -         | -        | -             | +        | 4        | +         |  | 4         | -        | 62       | -        | Н | Н        | -         | -        | Н        | -             | -        | -        | -            | 112      | -        | -        | -         | -         | -        | _        | -             |              | 4   |
|          | 13       | Н       | $\vdash$  | -        | +             | +        | +        | +         | +                                      | -         | <u>-</u> | 63<br>64 | Н        | Н | Н        | $\dashv$  | -        | Н        | $\dashv$      | $\dashv$ | -        |              | 113      | Н        | _        | +         | $\dashv$  | $\dashv$ | -        | +             |              | 4   |
| _        | 15       | Н       | $\vdash$  | $\dashv$ | $\dashv$      | -        | +        | +         | -                                      | +         | -        | 65       | Н        | Н | Н        | $\dashv$  | -        | Н        | $\dashv$      | $\dashv$ | $\dashv$ | $\vdash$     | 115      | Н        | _        | +         | -         | $\dashv$ | -        | -             | +            | -   |
| _        | 16       | -       | Н         | -        | $\dashv$      | +        | -+       | +         | +                                      | +         | -        | 66       | Н        | Н | Н        | +         | $\dashv$ | Н        | $\dashv$      | $\dashv$ | $\dashv$ | $\vdash$     | 116      | H        | _        | +         | -         | -        | -        | -             | +            | 1   |
|          | 17       |         | $\forall$ | $\neg$   | $\dashv$      | $^{+}$   | $^{+}$   | $^{+}$    | $^{+}$                                 | 1         | $\vdash$ | 67       | Н        | Н | т        | $\neg$    |          |          |               | 7        | ┪.       | _            | 117      | П        |          | $\forall$ | $\exists$ | 寸        |          | $\neg$        | $\top$       | 1   |
|          | 18       |         | П         | ╛        | $\neg$        | 7        | _        | $^{+}$    | $\top$                                 | 1         |          | 68       | П        | П | П        | $\neg$    | ╛        |          | П             | $\neg$   | _        | $\vdash$     | 118      | $\Box$   | _        | $\neg$    | ╗         | $\neg$   |          |               |              | 7   |
|          | 19       |         | П         | $\neg$   | Т             | 7        | Т        | П         |  | 7         |          | 69       |          |   | П        | П         |          |          |               |          |          |              | 119      |          |          |           |           | $\Box$   |          |               |              |     |
|          | 20       |         |           |          |               |          |          |           |  | ]         |          | 70       | П        | Γ |          | $\Box$    |          | П        |               |          | _        |              | 120      |          | _        |           | $\Box$    | $\Box$   |          | $\Box$        |              |     |
|          | 21       |         | Н         | 4        | 4             | 4        | _        | 4         | 4                                      | 4         | _        | 71       | Ш        | Ш | Ш        | 4         | _        |          | Щ             | _        | 4        | <u></u>      | 121      | Ш        |          | Н         | _         | _        | _        | _             | _            | 4   |
| _        | 22       |         | $\vdash$  | $\dashv$ | $\dashv$      | +        | -        | +         | +                                      | -         | -        | 72       | Н        | _ | Н        | $\dashv$  | 4        |          | $\dashv$      | $\dashv$ | -        | $\vdash$     | 122      | $\vdash$ | -        | -         | -         | -        | _        | +             | +            | 4   |
| _        | 23<br>24 |         | $\vdash$  | $\dashv$ | +             | -+       | +        | +         | +                                      | -         | -        | 73       | Н        | - | Н        | $\dashv$  | -        | Н        | $\dashv$      | $\dashv$ | $\dashv$ | $\vdash$     | 123      | $\vdash$ | -        | +         | $\dashv$  | -        | _        | +             | +            | -{  |
| $\vdash$ | 25       | Н       | $\vdash$  | $\dashv$ | +             | +        | +        | +         | +                                      | +         | -        | 75       | Н        | Н | Н        | +         | $\dashv$ | Н        | $\dashv$      | $\dashv$ | $\dashv$ | $\vdash$     | 125      | -        | -        | +         | -         | $\dashv$ | -        | +             | +            | ┥   |
| -        | 26       | Н       | $\forall$ | $\dashv$ | +             | +        | +        | +         | +                                      | +         | $\vdash$ | 76       | Н        | Н | -        | +         | -        | -        | -             | -+       | $\dashv$ | $\vdash$     | 126      | H        |          | $\forall$ | 7         | $\dashv$ | -        | +             | +            | 1   |
|          | 27       | Н       | $\forall$ | $\dashv$ | $\dashv$      | $^{+}$   | $^{+}$   | $^{+}$    | +                                      | 1         |          | 77       | Н        | - | Ħ        | $\neg$    | $\neg$   |          |               | 7        | _        |              | 127      | Ħ        |          | $\neg$    | $\neg$    | $\neg$   |          | $\neg$        | $\top$       | 1   |
|          | 28       |         |           | 7        | 7             | $\top$   | T        | $\neg$    | $\top$                                 | 1         |          | 78       |          |   |          | 1         | 7        |          |               | _        | _        |              | 128      | П        |          |           | ╛         | $\neg$   |          | $\neg$        | _            | 7   |
|          | 29       |         |           | $\neg$   | 7             | Т        | Т        | $\neg$    | 7                                      | ٦         |          | 79       |          |   | П        |           |          |          | $\neg$        | П        |          |              | 129      |          |          | Т         | $\neg$    | $\neg$   |          |               |              |     |
|          | 30       |         |           |          | $\Box$        | $\perp$  | $\perp$  |           | $\perp$                                | ]         |          | 80       |          |   |          |           |          |          |               |          | $\Box$   |              | 130      |          |          |           |           |          |          | $\Box$        |              |     |
|          | 31       |         | Ц         | _        | 4             | 1        | _        | 1         | _                                      | 4         | $\vdash$ | 81       |          | П | Ц        |           | _        |          | _             |          | _        | L.           | 131      | П        |          | _         |           |          |          | _]            | _            | 4   |
| $\vdash$ | 32       | Н       | Н         | _        | $\dashv$      | +        | +        | +         | +                                      | 4         | -        | 82       | Н        | Н | $\vdash$ | 4         |          | 4        | -             | 4        | -        | $\vdash$     | 132      | $\vdash$ | _        | -         | 4         | 4        | _        | -             | +            | 4   |
| $\vdash$ | 33       | Н       | Н         | -        | +             | +        | -        | +         | +                                      | -         | $\vdash$ | 83       | Н        | Н | Н        | +         | $\dashv$ | -        | $\dashv$      | -        | $\dashv$ | $\vdash$     | 133      | Н        | _        | -         | 4         | $\dashv$ | 4        | +             | +            | 4   |
| $\vdash$ | 35       | Н       | $\vdash$  | $\dashv$ | +             | +        | +        | +         | +                                      | +         | $\vdash$ | 85       | Н        | Н | Н        | +         | -        | Н        | $\dashv$      | +        | $\dashv$ | $\vdash$     | 134      | Н        | -        | $\dashv$  | -         | +        | -        | +             | +            | +   |
| Н        | 36       | Н       | $\vdash$  | $\dashv$ | $^+$          | +        | +        | +         | +                                      | +         | -        | 86       | Н        | Н | $\vdash$ | $\dashv$  | $\dashv$ | Н        | -             | $\dashv$ | $\dashv$ | $\vdash$     | 136      | Н        | _        | _         | +         | $\dashv$ | -        | +             | +            | 1   |
|          | 37       | Н       | $\vdash$  | ٦        | +             | +        | +        | +         | +                                      | 1         | _        | 87       | $\vdash$ | Н | Н        | +         | 7        | $\dashv$ | $\dashv$      | -        | $\dashv$ | $\vdash$     | 137      | H        | _        | 7         | -         | -        |          | +             | +            | 1   |
|          | 38       |         |           |          | 1             | 1        | 1        | 1         | 1                                      |           |          | 88       |          |   |          | 1         |          |          |               | 1        |          |              | 138      |          |          |           | 7         |          |          |               |              |     |
|          | 39       |         |           |          | J             | $\Box$   |          |           |  |           |          | 89       |          |   |          |           |          |          |               | J        |          |              | 139      |          |          |           |           | J        |          |               | I            |     |
|          | 40       |         |           |          |               | I        | 1        | I         |  |           |          | 90       |          |   | П        |           |          |          | $\Box$        |          | _        |              | 140      | П        |          | I         | _         | I        |          | Ţ             | $\perp$      | _   |
|          | 41       |         | Ц         | _        | $\perp$       | $\perp$  | 4        | 4         | _                                      | 4         | _        | 91       |          |   |          | 4         | _        |          |               | 4        | _        |              | 141      |          | _        | _         | _         | _        | _        | 4             | +            | -   |
| _        | 42       |         | $\vdash$  | _        | $\rightarrow$ | +        | 4        | +         | +                                      | -         | 1        | 92       | Ш        | Ш | Н        | -         | 4        |          | -             | -        | -1       | -            | 142      | Н        | _        | _         | 4         | -        | 4        | -             | +            | -   |
| -        | 43       | Н       | +         | 4        | +             | +        | +        | +         | +                                      | -11       | _        | 93       | Н        | Н | Н        | +         | -        | Н        | $\rightarrow$ | +        | -0       | -            | 143      | $\vdash$ | -        | +         | +         | +        | -        | +             | +            | -11 |
| -        | 45       | Н       | +         | $\dashv$ | +             | +        | +        | +         | +                                      | -         | -        | 95       | Н        | Н | $\vdash$ | +         | $\dashv$ | Н        | $\dashv$      | +        | -0       | <del> </del> | 144      | $\vdash$ | $\dashv$ | $\dashv$  | $\dashv$  | $\dashv$ | $\dashv$ | $\rightarrow$ | +            | -   |
| $\vdash$ | 46       | Н       | +         | $\dashv$ | +             | +        | +        | +         | +                                      | -         | -        | 90       | Н        | Н | $\vdash$ | $\dashv$  | $\dashv$ | Н        | -             | +        | -        | -            | 148      | $\vdash$ | -        | +         | $\dashv$  | $\dashv$ | -        | +             | +            | -   |
| $\vdash$ | 47       | Н       | +         | $\dashv$ | $^{+}$        | +        | +        | +         | +                                      | 1         | $\vdash$ | 97       | Н        | Н | $\vdash$ | $\dashv$  | $\dashv$ | Н        | -             | -1       | $\dashv$ | $\vdash$     | 147      | H        |          | _         | +         | -        | -        | +             | +            | 1   |
| М        | 48       | Н       | $\forall$ | $\dashv$ | 7             | $\dashv$ | +        | +         | $^{+}$                                 | 1         |          | 98       | Н        | Н | Н        | 7         | $\neg$   | П        | $\neg$        | 7        | _        | $\vdash$     | 148      | П        |          | 7         | 7         | _        | ╛        | $\neg$        | $^{\dagger}$ | 1   |
|          | 49       |         | П         | ┪        | T             | 1        |          |           |  | 7         |          | 99       | П        | П |          | 1         | 7        |          |               |          |          |              | 149      |          |          |           | ╛         | _        |          | J             | I            | 1   |
|          | 50       |         |           | T        | T             | T        | T        | Т         |  | 7         |          | 100      |          |   |          |           |          |          |               | T        |          |              | 150      |          |          |           |           |          | П        | Т             | $\top$       |     |